

REPRODUCTIVE CHARACTERISTICS OF FEMALE FROGS FROM MESIC HABITATS IN QUEENSLAND.

Memoirs of the Queensland Museum 39(2): 306. 1996:- Fecundity has important implications for the life history strategies and population dynamics of all animals, yet few data have been published on the fecundity of Australian frogs (Tyler 1989). Fecundity is herein defined in the strict sense of the word: 'the number of eggs produced by an individual' (Lawrence, 1989). The primary objective of this paper is to present new information on the reproductive characteristics of mesic frogs from eastern Queensland, some of which are now missing or their populations have declined (Ingram & McDonald, 1993; Richards et al., 1993; Hero, 1996). This paper is a supplement to the existing papers relating to fecundity of Australian frogs (reviewed by Tyler, 1989). We present egg counts and mean egg sizes (10 eggs measured / female) from clutches either dissected from museum specimens or layed in captivity. In museum specimens, half of the gonad was removed and the number counted doubled to give the total. Female body size is also provided because it may be an important determinant of fecundity. Specimens were dissected at the Queensland Museum in March 1996 and the museum registration numbers are provided where available.

The results are presented in Table 1. The amphibians exhibit a wide variety of egg numbers and egg diameters. A cursory examination of the data suggests a positive association between body size and egg numbers, however, there is no obvious phylogenetic influence. A thorough examination of these relationships, using a complete data set, is currently in progress.

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Table 1: Reproductive characteristics of female frogs from mesic habitats in Qld. Mean egg size is from a sample of 10 eggs / female (* indicates n=5 eggs). Measurements in mm. MED=Mean egg diameter

SPECIES	N O EGGS	M.E.D.	♀ SVL	SOURCE (QMJ)
Hyliidae				
<i>Litorio bicolor</i>	220	0.7*	22.6	19502
"	180	-	25.4	38378
<i>L. fallax</i>	574	-	29.1	pers. obs
<i>L. infrafrenota</i>	3364	1.2	96.2	51769
<i>L. lesueuri</i>	1612	1.0	51.05	61731
"	2240	1.5	64.15	61730
<i>L. lorico</i>	<150			36092
<i>L. nonnotis</i>	216	1.98	55.5	41298
"	136	2.93	51.75	41301
"	160	-	51.05	30901
<i>L. nyakalensis</i>	86	2.5	32.9	55596
"	90	1.9	37.35	55592
<i>L. revelata</i>	787	-	41.6	pers. obs.
<i>L. rheocola</i>	63	2.6	37.1	32105
"	46	2.4	35.0	25153
<i>L. xanthomero</i>	1598	1.5	54.1	43160
"	1454	1.4	54.2	36006
Myobatrachidae				
<i>Adelotus brevis</i>	216		33.75	28280
"	214	1.5*	35.35	27774
<i>Mixophyes foscicolata</i>	904	2.5	82.6	29256
<i>M. iteratus</i>	4184	1.6	108.4	22951
<i>M. schevilli</i>	422	2.5	84.6	43855
"	538	2.46	88.45	32136
"	318	2.9	79.1	48229
Ranidae				
<i>Rana daemeli</i>	2372	1.4	84.0	26211